

Applic. No. 10/667,568  
Am dt. dated December 9, 2004  
Reply to Office action of September 9, 2004

Claim Amendments

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (original): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness of between 10 and 25  $\mu$ m;

applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

providing the metal foil-brazing medium particle fraction with a maximum diameter of 0.08 mm and a minimum diameter of 0.02 mm for a metal foil thickness of substantially 0.02 mm.

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Claim 2 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25  $\mu\text{m}$ ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

filling the wedge with brazing medium having a mass ML in the wedge; and

setting a ratio  $\text{ML/DF}$  of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils to be substantially between 8 g/m and 16 g/m.

Claim 3 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25  $\mu\text{m}$ ;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

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filling the wedge with brazing medium having a mass ML in the wedge; and

setting an upper limit of the mass ML of the brazing medium dependent on the metal foil thickness DF given by an intersection of coordinates for (ML/DF; DF) of (14.8 g/m; 0.025 mm), (16 g/m; 0.02 mm) and (27 g/m; 0.01 mm), with ML/DF being a ratio of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

Claim 4 (original): The method according to claim 2, wherein the mass ML of the brazing medium has a lower limit dependent on the metal foil thickness DF given by an intersection of and lying along a curve passing through coordinates for (ML/DF; DF) of (9 g/m; 0.025 mm), (9.2 g/m; 0.02 mm) and (16 g/m; 0.01 mm).

Claim 5 (original): A method for manufacturing a metal foil connection, which comprises:

providing a first and a second metal foil having a thickness DF of between 10 and 25  $\mu$ m;

brazing the first and the second metal foils to one another at a connecting point forming a wedge;

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filling the wedge with brazing medium having a mass ML in the wedge; and

setting the mass ML of the brazing medium to be dependent on the metal foil thickness DF and to lie along an intersection of coordinates for  $(ML/DF; DF)$  of  $(11.2 \text{ g/m; } 0.025 \text{ mm})$ ,  $(12 \text{ g/m; } 0.02 \text{ mm})$  and  $(20 \text{ g/m; } 0.01 \text{ mm})$ , with  $ML/DF$  being a ratio of the mass ML of the brazing medium in the wedge to the thickness DF of the metal foils.

Claim 6 (original): The method according to claim 2, wherein the ratio  $ML/DF$  of the mass of the brazing medium ML in the wedge to the metal foil thickness DF is substantially  $= 11 \text{ g/m}$ , with a variation of between  $+15\%$  and  $-10\%$ .

Claim 7 (original): A method for manufacturing a body, which comprises:

providing sheet metal layers formed of at least partly structured metal foils having a thickness DF of between 10 and 25  $\mu\text{m}$ ;

at least partly brazing the sheet metal layers to one another at brazed connecting points each having a metal foil connection with two of the metal foils forming a wedge;

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filling the wedges with brazing medium having a mass ML in the wedges; and

setting a ratio ML/DF of the mass ML of the brazing medium in each of the wedges to the thickness DF of the metal foils to be substantially between 11 g/m and 16 g/m.

Claim 8 (original): A method for manufacturing a honeycomb body having metal foils with a thickness of between 10 and 25  $\mu\text{m}$ , which comprises connecting the metal foils to each other at a multiplicity of metal foil connections each formed according to claim 2.

Claim 9 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between [[20]] 10  $\mu\text{m}$  and 25  $\mu\text{m}$ ;

applying glue to the first and second metal foils;

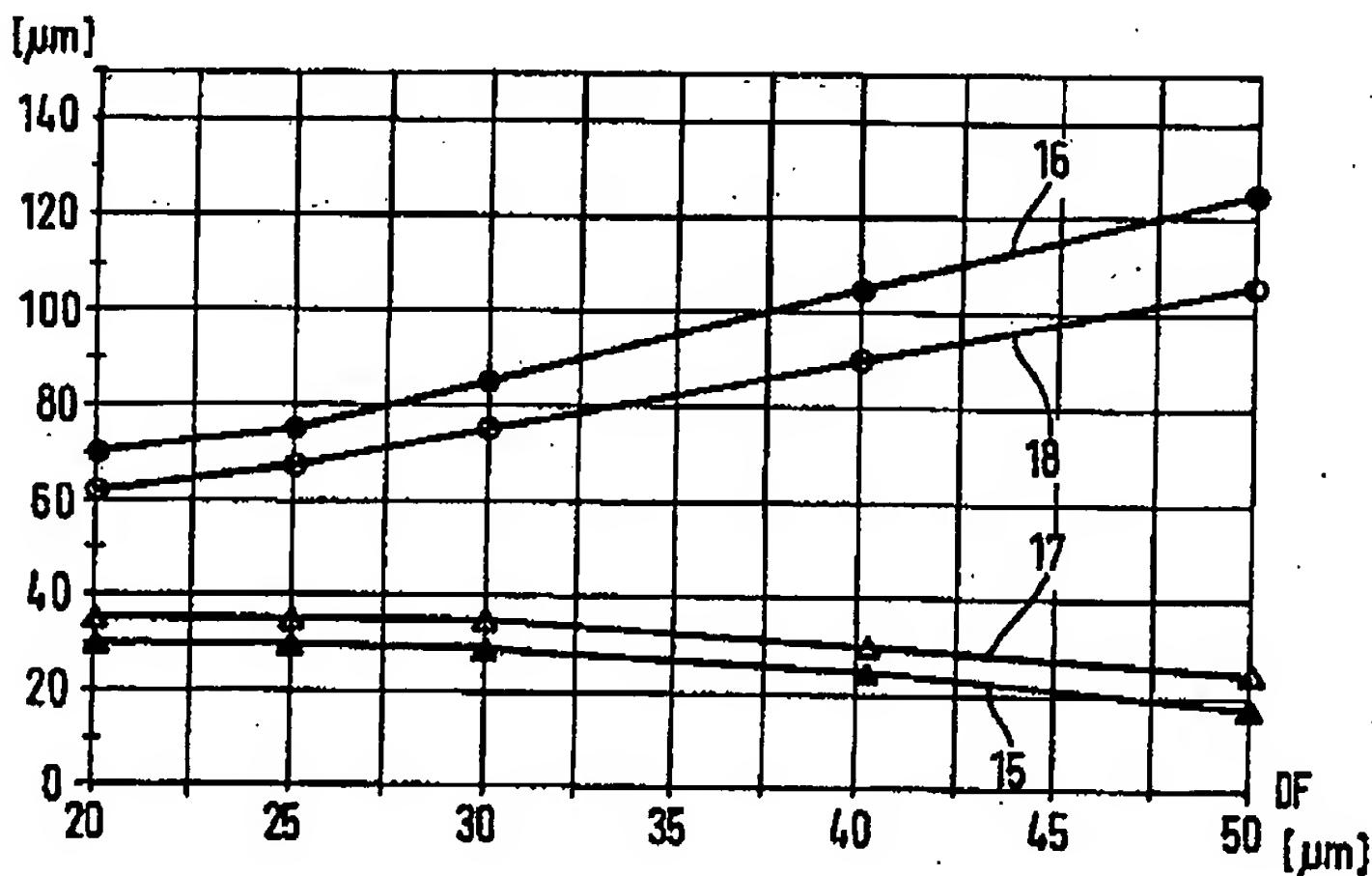
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subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 15 and 16 on the following graph:

Bandwidth of  
Particle Sizes



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with the abscissa representing the foil thickness in  $\mu\text{m}$  and the ordinate representing the particle diameter in  $\mu\text{m}$ .

Claim 10 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness substantially between [20] 10  $\mu\text{m}$  and 25  $\mu\text{m}$ ;

applying glue to the first and second metal foils;

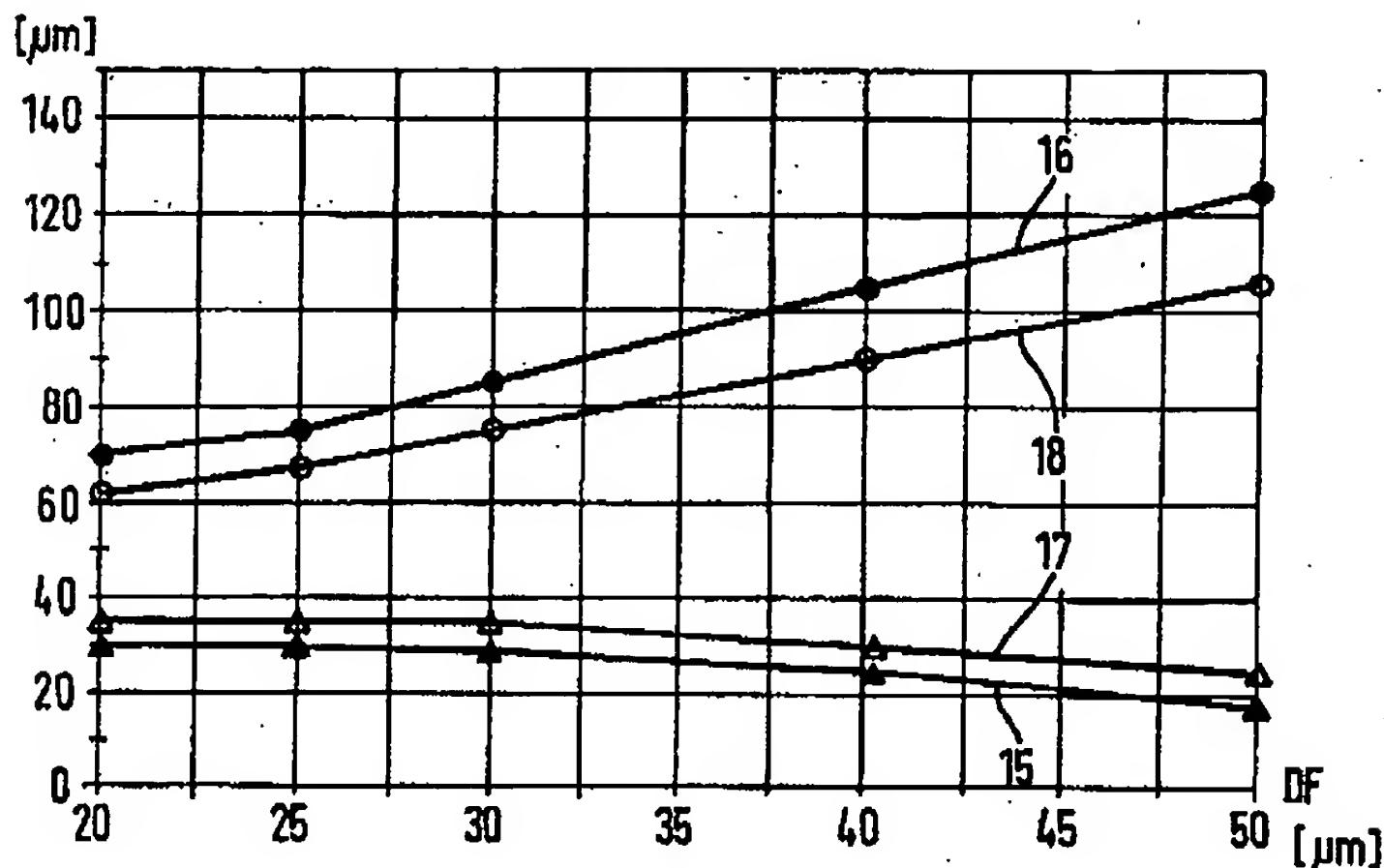
subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter and a maximum diameter of the metal foil-brazing medium particle fraction in dependence on the thickness of metal foils between lines 17 and 18 on the following graph:

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Bandwidth of  
Particle Sizes



with the abscissa representing the foil thickness in  $\mu\text{m}$  and the ordinate representing the particle diameter in  $\mu\text{m}$ .

Claim 11 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between [(20)] 10  $\mu\text{m}$  and 25  $\mu\text{m}$ ;

applying glue to the first and second metal foils;

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subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in  $\mu\text{m}$  in dependence on the thickness DF of metal foils in  $\mu\text{m}$  from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 30	approx. 70
approx. 25	approx. 30	approx. 74

and values located therebetween.

Claim 12 (currently amended): A method for manufacturing a metal foil connection of first and second metal foils using a metal foil-brazing medium particle fraction, the method which comprises:

providing the first and second metal foils with a thickness DF substantially between [20] 10  $\mu\text{m}$  and 25  $\mu\text{m}$ ;

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applying glue to the first and second metal foils;

subsequently placing the metal foil-brazing medium particle fraction in contact with the first and second metal foils;

brazing the first and second metal foils together at a connecting point forming a wedge; and

selecting a minimum diameter MinPD and a maximum diameter MaxPD of the metal foil-brazing medium particle fraction in  $\mu\text{m}$  in dependence on the thickness DF of metal foils in  $\mu\text{m}$  from the following table:

DF	MinPD	MaxPD
approx. 20	approx. 35	approx. 61
approx. 25	approx. 35	approx. 68

and values located therebetween.

Claim 13 and 14 (cancelled).

Claim 15 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

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Claim 16 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

Claim 17 (original): The method according to claim 1, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .

Claim 18 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 19 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

Claim 20 (original): The method according to claim 2, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .

Claim 21 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 22 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

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Claim 23 (original): The method according to claim 6, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu$ m.

Claim 24 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of 10  $\mu$ m.

Claim 25 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of 20  $\mu$ m.

Claim 26 (original): The method according to claim 7, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu$ m.

Claim 27 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of 10  $\mu$ m.

Claim 28 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of 20  $\mu$ m.

Claim 29 (original): The method according to claim 8, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu$ m.

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Claim 30 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 31 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

Claim 32 (original): The method according to claim 9, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .

Claim 33 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 34 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

Claim 35 (original): The method according to claim 10, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .

Claim 36 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 37 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

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Claim 38 (original): The method according to claim 11, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .

Claim 39 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of 10  $\mu\text{m}$ .

Claim 40 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of 20  $\mu\text{m}$ .

Claim 41 (original): The method according to claim 12, wherein the first and second metal foils have a thickness of between 10 and 20  $\mu\text{m}$ .